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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,877	10/29/2003	Kyung Ku Lee	P24396	4095
7055	7590	04/10/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			VORTMAN, ANATOLY	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,877

Applicant(s)

LEE, KYUNG KU

Examiner

Anatoly Vortman

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

1. The submission of the amendment filed on February 8, 2006 is acknowledged. Claims 1 through 3 have been amended and pending in the instant application.

Specification

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The language of the specification is cumbersome and unclear. This specification appears to be a literal translation from a foreign document and should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "If any one of the 3 phases current is broken, current is concentrated on the other phases to cause overload (sic)" (p. 2, lines 2-3), "the stationary contact are normally open contacts in the normal state that current normally flows through the electrical load (sic)" (p. 5, lines 2-3); and "when the circuit between the power source and the electrical load becomes to be abnormal state due the overload (sic)" (p. 6, lines 6-9), etc.

The entire specification should be carefully reviewed in order to correct this and other similar problems.

The Examiner directs the Applicant's attention to the fact that in the previous Office action it was explicitly stated that recited deficiencies of the specification are only the examples.

It was also required that "entire specification should be carefully reviewed in order to correct this and other similar problems". It appears that Applicant has corrected only the examples cited by the Examiner. Therefore, it is once again reiterated that the entire specification should be carefully reviewed in order to correct the aforementioned and other similar problems.

Claim Objections

3. Claim 1 is objected to because of the following informalities: claim recites "the switching mechanism" in line 9 of the claim, which lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's Admitted Prior Art (AAPA).

Regarding claim 1, AAPA teaches (specification, Fig. 2, p. 1-8): a thermal overload relay comprising:

an actuator (A) that generates power when an abnormal state occurs in a circuit between a power source and an electrical load; a switch (B) that switches contacts to an on or off state according the power transferred from the actuator; and a case (1) that receives the actuator (A) and the switch (B);

wherein the actuator further comprises: a plurality of main bimetals (2) arranged such that a longitudinally extending direction of each main bimetals is generally parallel to a bottom surface of the case (1) and configured to bend when the abnormal state occurs;

a plurality of heating members (3), each of the heating members is wound around the corresponding main bimetal (2) to transfer heat occurring due to the abnormal state to the main bimetal (2);

a shifter (4a, 4b) positioned to contact ends of the main bimetals (2) and arranged in parallel to the bottom surface of the case (1) such that the shifter is horizontally movable by the bending force of the main bimetals (2); and

a lever (see specification, p. 3, line 16 and p. 4, line 5) connected to the shifter (4a, 4b) that transfers the movement force from the shifter (4a, 4b) to the switch (B), wherein a temperature compensation bimetal (6) contacts an end of the lever (see specification, p. 4, lines 3+).

Regarding claim 2, AAPA teaches (Fig. 2) that the shifter (4a, 4b) comprises an upper shifter (4a) and a lower shifter (4b) positioned on a vertical plane, wherein each shifter is

arranged generally perpendicular to the ends of the bimetals (2), and parallel to the bottom surface of the case (1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of US/5901025 to Takahashi et al., (Takahashi).

AAPA teaches all and further that the lever is rotatably connected to the shifters (see specification, p. 4, lines 1 and 2), but did not specifically teaches that shafts are used to accomplish said rotatable connections.

Takahashi teaches an analogous actuating mechanism (Fig. 17 and 24), having a lever (75) being rotatably connected via shafts (75a, 75b) to the shifters (72, 73).

Since the teachings of AAPA and of Takahashi are from the same field of endeavor, the purpose of shafts disclosed by Takahashi would be recognized in the structure of AAPA.

It would have been obvious to a person of ordinary skill in the switch art at the time the invention was made to use shafts as taught by Takahashi in order to accomplish rotatable connections of AAPA in order to provide reliable pivoting connections with minimal frictional resistance.

Response to Arguments

8. Applicant contends that AAPA does not teach “a plurality of main bimetals arranged such that a longitudinally extending direction of each main bimetals is generally parallel to a bottom surface of the case”. This is not persuasive. The bottom surface may be any surface of the case, depending on the orientation thereof. If the AAPA’s Fig. 2 depicts a view from the top, then the bimetals (2) are arranged in parallel to the bottom surface (i.e. opposite to the top surface) of the case (1). Further, regarding 35 USC 103 rejection, the applicant’s statement that “Examiner has not presented sufficient motivation for the proposed modification” is not persuasive. Motivation has been explicitly recited in the rejection and is sufficient, i.e. “in order to provide reliable connections with minimal frictional resistance”. The Applicant did not provide any reasoning behind his point of view, i.e. why the motivation is not sufficient. Further, the Applicant contends that “the only reasons to combine teachings of the applied prior art results from a review of Applicant’s disclosure and the application of impermissible hindsight”. This is not the case. To the contrary, the reasons to combine teachings results from the review of the AAPA and US/5,901,025 to Takahashi et al. The Examiner would like to remind the Applicant that there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA) 1969. Further, in response to Applicant's argument that the Examiner's conclusion of obviousness is based upon

Art Unit: 2835

improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. *In re McLaughlin*, 443 F.2d 1392; 170 USPQ 209 (CCPA 1971).

In view of the above, the outstanding rejection of claims 1-3 is proper and hereby maintained.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

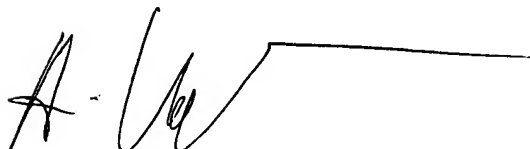
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anatoly Vortman
Primary Examiner
Art Unit 2835

AV

A handwritten signature in dark ink, appearing to be 'A. Vortman', followed by a long horizontal line extending to the right.